Commentary

Autopsies by Primary Practitioners

A Solution to the Decline in Autopsies?

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The postmortem examination—its art and science—has a long and revered history. It is probably the major instrument that brought medicine out of its Dark Ages. Before the age of specialization, the postmortem examination was carried out to great advantage by a wide variety of physicians. Since the age of specialization, it has become the province of pathologists. Indeed, in the past decade it has become the primary province of medical examiners, as autopsy rates have dropped precipitously in most hospitals.[1] The reasons for the decline in autopsies have been thoroughly discussed, evaluated, explained and deplored.[2-6] There seems to be general agreement that autopsies are still important tools. Numerous studies have documented that over the past three decades there has been a fairly constant rate of diagnoses found at autopsy that were not known previously. This rate generally runs about 10% in spite of newer predeath diagnostic techniques.[7-9] In spite of the exhortations of many, the decline continues and no practical solutions have been proposed.

In remote areas without a resident pathologist, the autopsy rate is virtually zero except for coroner's cases that necessitate transportation to a regional center. Human nature seems to dictate that something good is not appreciated until it is taken away. Our medical staff, sorely missing the advantages of autopsy, decided to do our own gross autopsies locally and send the tissue specimens off to our reference laboratory. As a tool of teaching and discovery, this has been well received by our medical and nursing staff.

A cited cause of the decline in autopsies is the lack of clinician interest in the procedure and findings. I propose that having interested primary practitioners do the dissection and gross pathological interpretation could be a solution to the waning interest in autopsies.

Methods

We selected cases for autopsy on the basis of minimal potential legal involvement. We believe that it is inappropriate for a nonpathologist to give legal testimony on postmortem data. That is, any patient who may be a coroner's case or any case in which there would possibly be a malpractice suit was rejected. This basically means that the patients must have been in the hospital for more than 24 hours as inpatients and that death must have occurred more or less expectedly. Autopsies are carried out at the local funeral home, which has a well-equipped preparation room. Appropriate permits are obtained. Policies and procedure were set up by the medical staff. The autopsies are done whenever feasible, usually within 12 hours of death, sometimes after-hours in the evenings, sometimes early in the mornings. Because autopsy technique is usually a part of basic medical school pathology, refreshing on the procedure is not difficult. I had cooperation from the King County Medical Examiner's office and our consultant hospital pathologist in renewing my autopsy technique. In all, since the introduction of autopsy to our hospital, we have done three postmortem examinations that were very beneficial to our staff, physicians and other professionals. We notify as many hospital professionals as possible. We invite emergency medical technicians, nurses, physicians and laboratory personnel to observe. Gross pathologic study is carried out and interpreted by me. Specimens for microscopic pathologic examination are sent to our reference laboratory where our consultant pathologist studies them. After completion, a clinical-pathological conference is held and a postmortem summary is completed by the pathologist.

Reports of Cases

Case 1

A 51-year-old man had been known to have severe emphysema for 17 years. He died after a prolonged period of terminal respiratory failure. Protease inhibitor studies on the family and patient were negative. The autopsy diagnoses were severe pulmonary emphysema, passive congestion of the liver, generalized arteriosclerosis with old focal myocardial infarction and mild nephrosclerosis. Nothing totally unexpected was shown by the autopsy. However, it was of great benefit for the nursing staff, many of whom had never seen an autopsy nor the classical findings of chronic lung disease.

Case 2

A 72-year-old man had had very little in the way of regular health care. He was known to be a heavy smoker and drinker. He was admitted to hospital with transient focal neurological findings and general debility. On x-ray studies a mass was noted in the upper portion of the left lung. Results of

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needle biopsy of the upper lung mass were difficult to interpret but thought to show squamous cell carcinoma. Shortly after the biopsy, the patient became comatose and after five days died in the hospital. The autopsy results showed pulmonary blastoma with tumor embolism to the gastric artery and secondary ulceration, as well as tumor embolism to the anterior cerebral circulation. He had mild emphysema, coronary atherosclerosis and passive congestion of the liver and spleen. In this case, the autopsy brought forth a diagnosis that would not have been known without the postmortem examination. Indeed, pulmonary blastomas are extremely rare tumors.

Case 3

A 78-year-old man was admitted to hospital with a problem of general debility, malnutrition and anal fistula. The patient had neutropenia and, at various times, was felt possibly to have Felty's syndrome or a possible bone marrow abnormality. The patient had a gradual downhill course ending in coma and death. On autopsy there were classical findings of hepatic cirrhosis, portal hypertension with varices and ascites, gallbladder stones, severe coronary atherosclerosis and lobular pneumonia of the right lower lobe. At the clinical-pathological correlation, gathering together the knowledge of several physicians involved, it became quite evident that the patient had a severe problem with alcohol. All of the other problems were probably due to the long history of alcohol intake. In this case, the clinical-pathological correlation greatly clarified the major problem of this patient.

Discussion

Determining the cause of death is the traditional purpose of autopsy. The use of the postmortem examination has many benefits beyond this. Garcia and Wilmes[3] have shown that pathologists can apply techniques such as electron microscopy and immunocytology in deciphering difficult cases and to expand medical knowledge. In our experience (primary care) the autopsy has great benefit in reviewing anatomy and pathology and in clarifying the primary problems of our patients. In the three examples, a rare tumor was discovered and attention was refocused on the patients' primary problems. These cases must certainly have a beneficial effect on patient care.

We found that autopsies carried out by an interested primary care practitioner were quite stimulating and beneficial to the hospital community in general. We also feel that an autopsy done by an interested nonpathologist is still better than no autopsy at all. In remote areas autopsies must be done by nonpathologists. However, in more populated areas autopsies carried out by practitioners in cooperation with a pathologist may be a solution to the declining interest in autopsies. Clearly, not all practitioners will have the time or interest to participate and some find such studies repulsive. Autopsies carried out by interested nonpathologist practitioners would spread the burden of these nonrevenue-producing procedures around to several departments and stimulate clinicians by more direct involvement. In addition, perhaps educational credit could be extended to autopsy participants. There are some positive steps that can be taken to reverse the decline in autopsies.

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